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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/927,577 | 08/13/2001 | Graham Bank | 085874-0364 | 5427 |

22428 7590 12/01/2003

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WASHINGTON, DC 20007

| EXAMINER | |
|---|---|
| HARVEY, DIONNE | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2643 | 11 |

DATE MAILED: 12/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



TS

# Office Action Summary

| Application No. | Applicant(s) |
|---|---|
| 09/927,577 | Bank |
| **Examiner** | **Art Unit** |
| Dionne Harvey | 2643 |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-3, 5, 6, 8-12, 14, 15, and 17-19* is/are rejected.

7) ☒ Claim(s) *4, 7, 13, and 16* is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

## DETAILED ACTION

### *Claim Rejections - 35 U.S.C. § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3,5,6,8,10-12,14,15,17 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1-3,5,6,8,10-12,14,15,17 and 18 recite, "...exciter(s) is capable of generating..." This is vague and indefinite.

### *Claim Rejections - 35 U.S.C. § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3,6,9,10-12,15 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mochida (3,509,290) in view of Armstrong (US 4,554,411).

Regarding claim 1, in figure **2,** Mochida teaches an acoustic device relying on radiation/bending wave action via at least two exciters **2,3** mounted to a panel **1** so as to cause significant surface vibration over the panel area favorable to desired acoustic output. Mochida

does not clearly teaches that each exciter is adapted for connection respective independent sources of drive signals.

Armstrong teaches a loudspeaker system wherein independent sources of drive signals (intercom, stereo, alarm, door bell) are provided for connection to a loudspeaker. It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of Mochida and Armstrong, connecting the independent sources of drive signals to the respective exciters of Mochida, for the purpose of providing a multipurpose loudspeaker capable of communicating a multiplicity of audio content and able to function as musical loudspeaker, door bell, house alarm, etc..

Regarding claim 2, The combination of Mochida and Armstrong does not specifically teach that each exciter is capable of generating a maximum sound pressure level, the levels being different. However, the Examiner takes Official Notice that exciters capable of generating a maximum sound pressure level, the levels being different, is well known in the art and would have been obvious to construct exciters such that the maximum sound pressure of each exciter varies, depending on the intended use of said exciter.

Regarding claims 3 and 6, the combination of Mochida and Armstrong teaches that the multiple exciters may provide an audio output for independent sound sources. The maximum frequency bandwidth of the stereo sound source will be greater than the maximum frequency bandwidth of the doorbell sound source, as claimed.

Regarding claim 9, The combination of Mochida and Armstrong does not specifically teach that the loudspeaker may be adapted for installation and operation in a ceiling tile.

However, The Examiner takes Official Notice that adaptation of a loudspeaker for installation and operation in a ceiling tile is well known in the art and it would have been obvious to adapt a flat loudspeaker for installation and operation as a ceiling tile, thereby overcoming the faults of existing technology which includes excessive sound intensity, directional effects and poorer intelligibility.

Regarding claim 10, in figure **2,** Mochida teaches an acoustic device relying on radiation/bending wave action via a plural number of exciters **2,3** mounted to a panel **1** so as to cause significant surface vibration over the panel area favorable to desired acoustic output. Mochida does not clearly teach that each exciter is adapted for connection to independent sources of drive signals or that there are the same number of independent sources as the number of exciters.

Armstrong teaches a loudspeaker system wherein independent sources of drive signals (intercom, stereo, alarm, door bell) are provided for connection to a loudspeaker. It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of Mochida and Armstrong, connecting the independent sources of drive signals to the respective exciters of Mochida, for the purpose of providing a multipurpose loudspeaker capable of communicating a multiplicity of audio content and able to function as musical loudspeaker, door bell, house alarm, etc.. It also would have been obvious for one of ordinary skill in the art at

the time of the invention to provide more, an equal or less number of sound sources as exciters, depending upon the intended use of the loudspeaker and the intensity of the output per sound source, desired.

Regarding claim 11, The combination of Mochida and Armstrong does not specifically teach that each exciter is capable of generating a maximum sound pressure level, the levels being different. However, the Examiner takes Official Notice that exciters capable of generating a maximum sound pressure level, the levels being different, is well known in the art and would have been obvious to construct exciters such that they vary in degree of sound pressure capable of producing, depending on the intended use of said exciter.

Regarding claims 12 and 15, the combination of Mochida and Armstrong teaches that the multiple exciters may provide an audio output for independent sound sources. The maximum frequency bandwidth of the stereo sound source will be greater than the maximum frequency bandwidth of the doorbell sound source, as claimed.

Regarding claim 18, in figure **2,** Mochida teaches a method of operating a loudspeaker, as inherently taught by the structure of the apparatus, comprising a panel relying on radiation/bending wave action and at least two exciters **2,3** mounted to a panel **1** so as to cause significant surface vibration over the panel area. Mochida does not clearly teach that each exciter is adapted for connection to independent sources of drive signals.

Armstrong teaches a loudspeaker system wherein independent sources of drive signals (intercom, stereo, alarm, door bell) are provided for connection to a loudspeaker. It would have

been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of Mochida and Armstrong, connecting the independent sources of drive signals to the respective exciters of Mochida, for the purpose of providing a multipurpose loudspeaker capable of communicating a multiplicity of audio content and able to function as musical loudspeaker, door bell, house alarm, etc..

Regarding claim 19, The combination of Mochida and Armstrong teach that one of the exciters is selectively driven such that the panel produces an alarm signal (see Armstrong), and an exciter is selectively driven such that the panel produces an audio signal is the form of music. The combination does not specifically teach that another of the exciters is selectively driven such that the panel produces a signal conditioning signal. However, it would have been obvious for one of ordinary skill in the art at the time of the invention to provide an additional exciter for producing any variety of signals such as a signal conditioning signal, noise cancellation, a doorbell, an intercom etc, depending upon the intended use of the device. Further more, it would be obvious to provide any combination of said independent sources in alternate embodiments for cross-the-board marketing to consumers.

***Allowable Subject Matter***

Claims 4,7,13 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 5,8,14 and 17 are objected to due to their dependency upon the above claims.

## *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dionne Harvey whose telephone number is (703) 305-1111. The examiner can normally be reaches on Monday through Friday from 8:30am to 6:00pm.

**Any responses to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, DC 20231

**or faxed to:**

(703) 308-6306, for formal communications for entry

**Or:**

(703) 308-6296, for informal or draft communications, please label "PROPOSED" or "DRAFT".

Hand delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor(Receptionist)

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz, can be reached at (703) 305-4708.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dionne Harvey whose telephone number is (703) 305-1111.

D.H.

November 25, 2003

CURTIS KUNTZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600